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July 16, 1990

Deane Zeller  
District Director  
Bureau of Land Management  
Salt Lake District Office  
2370 South 2300 West  
Salt Lake City, Utah 84119

Dear Deane:

I have recently reviewed the draft charter and the agenda for the first meeting of the Bonneville Salt Flats Conservation Coalition and have discussed them with Chris Kersting. The documents reflect nicely the objectives we have discussed and I look forward to meeting with the Coalition members. It is my understanding that the first meeting will likely be held July 31, 1990 at 1:00 P.M.

As you and Chris recently discussed, we have prepared an information packet on the Pilot Valley exchange for distribution to Coalition members in advance of the first meeting. The packet will provide an opportunity for members to review the basics of this proposal so that discussion may focus on the plan's substance and an action plan to explore it further. Please review the packet and contact me if you have questions or believe additional information would be useful. Perhaps you will have received the packet in time to include a copy in your initial mailing to each prospective Coalition member. Otherwise, if you anticipate difficulty in having a copy sent to those who will attend the meeting, please contact us so that we may assume this task.

I look forward to seeing you at the meeting. In the meantime, please let me know if we can be of further assistance.

Sincerely,



John Russell Deane III

Enclosures



## MEMORANDUM

TO: Bonneville Salts Flats Conservation Coalition

FROM: John Russell Deane III, General Counsel  
Specialty Equipment Manufacturers Association (SEMA)  
and National Hot Rod Association (NHRA)

DATE: July 16, 1990

RE: Overview of Pilot Valley Lease Exchange Proposal

### Introduction

Among the various alternatives which should be considered in the effort to preserve the Bonneville Salt Flats, a promising prospect is the leasing of additional potash-rich lands under the control of The Bureau of Land Management (BLM) to Reilly Industries in return for termination of the BLM leases which Reilly holds on lands adjacent to the Flats and/or the modification of mining procedures which are underway on Reilly's privately held lands along Interstate 80. This memorandum presents a description the Pilot Valley Playa, a potassium deposit in the vicinity of the Salt Flats which may be useful in a lease exchange. Also presented is a list of issues the Coalition must address to determine the viability of this and other proposals for preserving the Bonneville Salt Flats.

### Pilot Valley Playa Potash Resource

The Pilot Valley is located approximately 15 miles north of Reilly's production facility in Wendover, Utah (Exhibit A). The mineral-rich playa is approximately 20 miles long and 8 miles wide comprising nearly 140 square acres. Like the Bonneville Salt Flats, the area is saturated with mineral brine only a few feet below the surface. Unlike the Salt Flats, the surface is composed of loose salt crystals mixed with other minerals and sediment.

Over the years a number of studies have been conducted to determine the presence and concentration of minerals at Pilot Valley. One early study was conducted by the United States Geological Survey (Nolan, 1927) which identified brine containing sodium chloride, potassium, magnesium and sulphate. In 1967, the Quintana Petroleum Corporation conducted what may be the most comprehensive study of the Pilot Valley potash resource (Exhibit B). This study will be referred to here for the purpose of describing the potential potash resource. It is important to note however, that the study is more than 20 years old and



subject to substantial revision through the use of current survey and research methods.

As part of its study, Quintana drilled a series of test wells and gathered extensive data on characteristics of both the soil and the brine. It then produced a map locating potassium concentrations at various test wells throughout the playa. Because the original of this map was color-coded, it is difficult to reproduce quality black and white xerox copies. A copy of the map is nevertheless attached here (Exhibit C) because close scrutiny reveals the location throughout the playa of potash in concentrations well above .50%. (For purposes of its study, Quintana assumed that potassium concentrations of less than .50% would be too low for commercial recovery.) Some of the concentration data is presented again in Exhibit D which shows well locations and concentrations placed on a map which also indicates the ownership of the mineral rights by the BLM, the State of Utah and private holders. Exhibit D makes clear that the majority of mineral rights in the area are held by the BLM or the State of Utah and are available for an exchange. The BLM has already taken formal action to segregate its lands in the area from mineral appropriation until the merits of the Pilot Valley exchange proposal are explored further. A similar segregation of state lands is being proposed.

To better understand the relative value of the Pilot Valley potash resource as compared to the resource on Reilly's federal leases at the Salt Flats, Steve Brooks of the BLM Salt Lake District Office compiled a rough comparison of values and factors which could be important to the proposed exchange (Exhibit E). However, as Brooks notes, the estimates are rough and further study may alter the comparison substantially. For example, the comparison does not consider the value of the deep-well potash resource (below the 10-18 feet "shallow aquifer") which may or may not be substantial at either site. Furthermore, the Quintana study assumes that recharge of the brine production will occur only by rainfall and snow and not by lateral or vertical upward migration of brine to re-establish the water table and refill the drawdown cone in the production area. Further study may prove this assumption valid or invalid. The study further assumes that the potash available for production occurs only in the brine and that potash in the sediment and clays will not diffuse into water which replaces the brine withdrawn annually. These assumptions and others, made in 1967, will need to be reconsidered and updated by applying modern testing and research technology. As well, information on the Salt Flats potash reserves also need to be reviewed and updated.



## Issues for Consideration and Exploration By the Coalition

In order to determine if an exchange of federal and state leases on the Salt Flats and Pilot Valley is a viable approach in the effort to preserve the Salt Flats, the Coalition must be prepared to address a number of issues and take responsibility for tasks necessary to evaluating the proposal. The following is a brief list of some issues and tasks that have been identified thus far:

1. Research the land records and other records to determine who might have rights to the surface, the locatable minerals and the leasable minerals on the private property which might be instrumental to the success of the lease swap. This includes property in the Pilot Valley, the surrounding areas and the necessary right-of-way between the Pilot Valley and the Reilly-Wendover operations. This same task has been substantially completed in identifying federal and state ownership and it has been determined there are currently no leases or claims on the state and federal property in question.
2. Conduct a study/survey to determine the extent of the Pilot Valley mineral resource and the commercial viability of its production. The survey would involve an assessment of mineral volume and the degree to which it could be extracted given the geology, subsurface location, hydrologic cycle, terrain, etc.
3. Determine the investment that would be necessary for the recovery of potash in the Pilot Valley. Production would require new extraction ditches, pipelines, etc. Attempt to evaluate comprehensively the requirements and their costs.
4. Explore the administrative procedures for making the new mining site available to Reilly. The exchange of federal leases would most likely come under the regulatory scheme set forth in 43 C.F.R. Section 3508, which permits the Secretary of the Interior to determine that an exchange of federal leases may take place when development on existing leases is determined to be undesirable. The State's regulatory procedure will also need to be researched and understood.
5. Analyze the properties under the jurisdiction of the Department of Defense located to the south of I-80 and Reilly-Wendover to determine what would be necessary to make use of these lands for various purposes, i.e., limited access for mineral withdrawal ditches.



6. As part of the process of protecting the Flats, we should consider other measures including positive barriers between the Flats and the areas being mined. These could include walls or other impervious barriers. We should also consider the potential of employing reverse gradients. Also review the potential for reclamation by reintroducing the salt from Reilly's evaporation ponds to the Flats.

The list of issues set forth above is intended to initiate discussion and action on the Pilot Valley proposal and other means to preserve the Salt Flats. Coalition members are encouraged to note further issues on these and other proposals which will require exploration by the Coalition. Your comments and input will insure that the first Coalition meeting is a meaningful and substantive one.



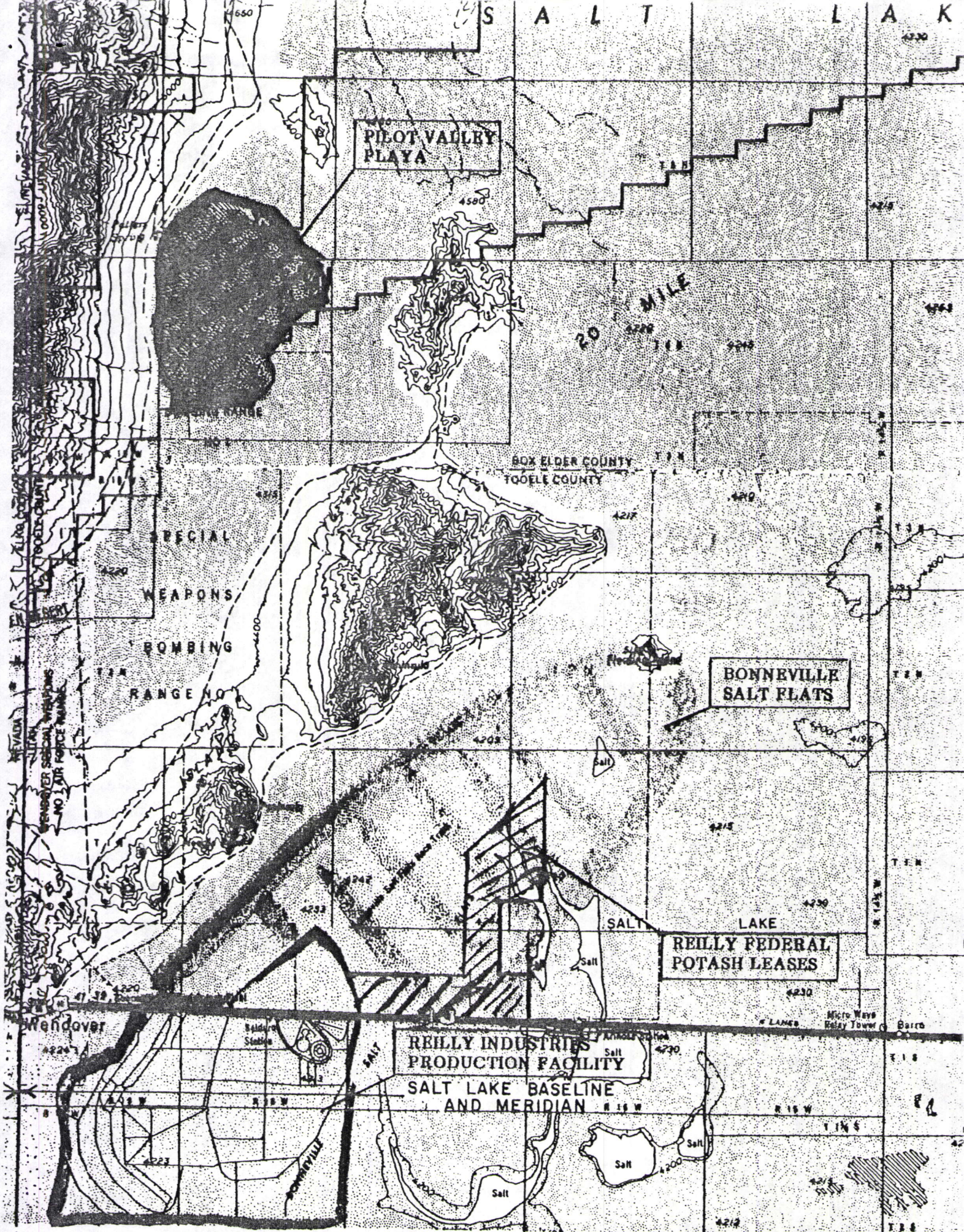


EXHIBIT "A"